

## ABSTRACT OF THE DISCLOSURE

The invention relates to the discovery of two markers that are informative for one or more of tumorigenesis, tumor progression, and tumor aggressiveness associated with non-small cell lung cancer (NSCLC). The markers are the HOXA9 gene and the gene encoding death-associated protein kinase (DAP-kinase) of humans. Methods of diagnosing NSCLC and methods of assessing the degree of progression and aggressiveness of NSCLC tumors are disclosed, as are methods of inhibiting or alleviating NSCLC. The invention also includes screening methods for identifying compounds that are useful for alleviating, inhibiting, or preventing NSCLC.